

*Laure: Please look this over. Rog  
Roger - this is the revised discussion*

#### IV. DISCUSSION

The flume head composite concentrations ranged from 123 ppm in 1987, to 14.26 ppm in 1988, to 28 ppm in 1989. PCB residues ranging from several hundred to several tens of parts per million have been reported almost every year in the flume since 1984. The present sediments are supposedly those that entered after the November 1985 cleanup. One can surmise that patches of sediment of varying concentrations exist there today. Perhaps due to some episodic disturbance, PCB-containing sediment was transferred to the double pipe head from the flume head, since the concentration increased from 2.23 ppm last year, to 23 ppm at present. The structural barrier for outflow of sediments from the flume head to the double pipe head is only a few inches above the present sediment surface. Other than by rain, no mechanism is now known to flush the flume head unless someone deliberately hoses it out. The flume below the double pipe mouth appears to have been flushed by daily tidal action sufficiently so that the samples yielded less than 1 ppm.

The differences in Aroclor numbers reported as either 1260 or 1254 probably do not represent a new contamination input. More likely, the PCBs in the flume head that appeared after the cleanup are all from the same input. Each Aroclor is a mixture of isomers, some of which may be more or less volatile or soluble than others, and can change over time. The designation of the Aroclor number is a judgmental interpretation, particularly if the residues are old. One analyst might call a sample "1260," and another, one year later, decide to report "1254." Also, the sediments may contain a mixture of two Aroclors not homogeneously distributed throughout the flume head bottom.

For the next monitoring task, we recommend that sampling at Myrtle Street be dropped, and that two wood cores are obtained between Willow Street and the double pipe mouth. The total number of samples remains at seven. Seattle City Light might consider pumping out the flume head in the near future.